State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY HERBERT
Lieutenant Governor

Department of
Environmental Quality

William J. Sinclair
Acting Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-IN0130500003-09

March 11, 2009

Martin Snow
Universal Industrial Sales Incorporated
PO Box 699
Pleasant Grove, UT 84062

Dear Mr. Snow:

Re: Intent to Approve: Modifying the Universal Industrial Sales Approval Order DAQE-AN13050001-05 for an Increase in HAP Emissions and Equipment Designation, Utah County; CDS B; NSR, Nonattainment or Maintenance Area
Project Number: N013050-0003

The attached document is the Intent to Approve for the above-referenced project. The Intent to Approve is subject to public review. Any comments received shall be considered before an Approval Order is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an Approval Order. An invoice will follow upon issuance of the final Approval Order.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Nando Meli Jr., who may be reached at (801) 536-4052.

Sincerely,

Ty L Howard, Manager
New Source Review Section

TLH:NM:kw

cc: Utah County Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

INTENT TO APPROVE: Modifying the Universal Industrial Sales Approval Order DAQE-AN13050001-05 for an Increase in HAP Emissions and Equipment Designation.

Prepared By: Nando Meli Jr., Engineer
Phone: (801) 536-4052
Email: nmeli@utah.gov

INTENT TO APPROVE NUMBER

DAQE-IN0130500003-09

Date: March 11, 2009

Galvanizing Facility

Source Contact:
Mr. Scott Turner
Phone: (801) 785-0505

Ty L Howard, Manager
New Source Review Section
Utah Division of Air Quality

ABSTRACT

Universal Industrial Sales, Inc. (UIS) operates a galvanizing plant in Lindon, Utah. UIS produces an assortment of highway products such as Construction Sign Stands, Metal Bridge Railing, Pedestrian Railing, Ground Mounted Signs, and Sign Structures. Some of the products are painted after they have been sandblasted. UIS has requested an increase in the HAP emissions to enable them to paint a wider variety of products. The painting and sand blasting operations is conducted indoors with no ventilation to the atmosphere.

Utah County is a Non-attainment area of the NAAQS for PM_{10}. NSPS, NESHAP and MACT regulations do not apply to this source. Title V of the 1990 Clean Air Act does not apply to this source. The HAP emissions will increase from 3.07 to 5.80 tons per year.

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the intent to approve will be published in The Daily Herald on March 17, 2009. During the public comment period the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

Name of Permittee:	**Permitted Location:**
Universal Industrial Sales Incorporated PO Box 699 Pleasant Grove, UT 84062	Galvanizing Facility 435 N 1200 W Lindon, UT 84042

UTM coordinates:436900 m Easting, 4468000 m Northing
SIC code:3479 (Coating, Engraving, & Allied Services, NEC)

Section I: GENERAL PROVISIONS

I.1 All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]

I.2 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]

I.3 Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4 All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's

representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401]

I.5 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]

I.6 The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring. [R307-150]

I.7 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]

Section II: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 **Galvanizing Plant**
Universal Industrial Sales, Inc. galvanizing plant in Pleasant Grove, Utah

II.A.2 **Indoor Grit Blasting**
Design capacity 2,000 lbs/hr

II.A.3 **Two natural gas fired boilers**
Each boiler is a 1.0 MMBTU/hr natural gas fired boiler
One boiler is a back-up boiler
This equipment is listed for informational purposes only

II.A.4 **Galvanizing kettle heater**
Natural gas fired with with four burners
Total heating capacity 7.6 MMBTU/hr
Burner design low NO_x

II.A.5 **Galvanizing kettle**
Design capacity 15 tons/hr
Maximum operating temperature 460^oC
Surface dimensions 5 ft x 42 ft

II.A.6 **Paint booth**
Dimensions 20,000 ft^2

II.A.7 **Two phosphoric acid dip tanks**
Maximum operating temperature $90^{o}F$
Surface dimensions 6 ft x 46 ft

II.A.8 **Two water rinse tanks for phosphoric line**
This equipment is listed for informational purposes only

II.A.9 **Three sulfuric acid dip tanks**
Maximum operating temperature $160^{o}F$
Surface dimensions 6 ft x 46 ft

II.A.10 **Two water rinse tanks for sulfuric line**
This equipment is listed for informational purposes only

II.A.11 **Pre-Flux dip tank**
Contains zinc ammonium chloride solution
This equipment is listed for informational purposes only

II.A.12 **Sulfuric Acid Purification System**
This equipment is listed for informational purposes only.

II.B Requirements and Limitations

II.B.1 **Limitations and Tests Procedures**

II.B.1.a Visible emissions from the following emission points shall not exceed the following values:

A. Grit blasting operation - 0% opacity
B. Paint booth operation - 0% opacity
C. All other points - 10% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.
[R307-401]

II.B.1.b The Zinc consumption shall not exceed 1,600 tons of Zinc per rolling 12-month period. To determine compliance with a rolling 12-month total Universal Industrial Sales shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of consumption shall be kept for all periods when the plant is in operation. Consumption of zinc shall be determined by purchase records. The records of consumption shall be kept on a monthly basis. [R307-401]

II.B.1.c The concentration of Phosphoric acid in the tanks shall not exceed 15% by weight. The temperature of the phosphoric acid tanks shall not exceed $90^{o}F$. The concentration shall be checked at least once every seven days using a method which has been approved by the Executive Secretary. The tank shall be equipped with a permanently mounted thermometer to measure the water temperature. The thermometer shall be located where an inspector can

safely read the temperature at any time. A portable thermometer may be used in lieu of the permanently mounted thermometer. Continuous recording is not required. Both the temperature and concentration shall be recorded weekly in a log. [R307-401]

II.B.1.d The concentration of H_2SO_4 in the acid tank shall not exceed 15% by weight. The temperature of the acid pickling tank shall not exceed 160°F. The concentration of H_2SO_4 shall be checked at least once every week using a method which has been approved by the Executive Secretary. The tank shall be equipped with a permanently mounted thermometer to measure the water temperature. The thermometer shall be located where an inspector can safely read the temperature at any time. A portable thermometer may be used in lieu of the permanently mounted thermometer. Continuous recording is not required. Both the temperature and concentration shall be recorded weekly in a log.

A. The operation shall be the dry type. The flux shall be skimmed off as necessary to meet the opacity limit in condition #10.

B. This Approval Order is for a batch type galvanizing operation only.
[R307-401]

II.B.1.e Universal Industries Sales shall maintain the operating parameter in the preflux tank at a temperature no greater than: 160°F.

The tank shall be equipped with a permanently mounted thermometer to measure the water temperature. The thermometer shall be located where an inspector can safely read the temperature at any time. A portable thermometer may be used in lieu of the permanently mounted thermometer. Continuous recording is not required. The parameter shall be recorded weekly in a log.
[R307-401]

II.B.2 **Fuels**

II.B.2.a Universal Industrial Sales shall only use natural gas as a fuel in the plant. [R307-401]

II.B.3 **Volatile Organic Compound (VOC) and Hazardous Air Pollutants (HAPs) Limitations**

II.B.3.a The plant-wide emissions of VOCs and HAPs from the paint booths, degreasers, contact cement applicators, etc. and associated operations shall not exceed:

10.20 tons per rolling 12-month period for all VOCs combined
0.90 tons per rolling twelve-month period for Ethylbenzene
0.60 tons per rolling twelve-month period for Methyl Isobutyl Ketone
1.50 tons per rolling twelve-month period for Toluene
2.40 tons per rolling twelve-month period for Xylene (considered together)
0.10 tons per rolling twelve-month period for each individual HAPs not listed above
5.80 tons per rolling 12-month period for all HAPs combined

Compliance with each/the limitation shall be determined on a rolling 12-month total. Based on the twentieth day of each month, a new 12-month total shall be calculated using data from the previous 12 months.

The VOC and HAP emissions shall be determined by maintaining a record of VOC and HAP emitting materials used each month. The record shall include the following data for each material used:

A. Name of the VOC and HAPs emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.

B. Density of each material used (pounds per gallon)

C. Percent by weight of all VOC and HAP in each material used

D. Gallons of each VOC and HAP emitting material used

E. The amount of VOC and HAP emitted monthly by each material used shall be calculated by the following procedure:

$$\text{VOC} = \frac{\%\ \text{VOC by Weight}}{(100)} \times \frac{[\text{Density (lb)}]}{(\text{gal})} \times \text{Gal Consumed} \times \frac{1\ \text{ton}}{2000\ \text{lb}}$$

$$\text{HAP} = \frac{\%\ \text{HAP by Weight}}{(100)} \times \frac{[\text{Density (lb)}]}{(\text{gal})} \times \text{Gal Consumed} \times \frac{1\ \text{ton}}{2000\ \text{lb}}$$

F. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC or HAP emissions. [R307-401]

II.B.4 **Monitoring - General Process**

II.B.4.a The owner/operator shall calibrate, maintain, and operate a monitoring device for the continuous measurement of the temperature in the galvanizing kettle, sulfuric acid and phosphoric acid dip tanks. The monitoring device must be certified by the manufacturer. The monitoring device shall be accurate within 10oF. Continuous recording for the monitoring device is not required. However, weekly records of readings shall be maintained. [R307-401]

PERMIT HISTORY

The final AO will be based on the following documents:

Supersedes AN3050001-05 dated October 12, 2005

ACRONYMS

The following lists commonly used acronyms and their associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
ATT	Attainment Area
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by EPA to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	Carbon monoxide
COM	Continuous opacity monitor
DAQ	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
MACT	Maximum Achievable Control Technology
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
UAC	Utah Administrative Code
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds